AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in this application.

Listing of Claims:

Claim 1 (currently amended): A device for inducing local bone or cartilage formation, comprising:

a bone morphogenetic protein selected from the group consisting of OP1, OP2, OP3, BMP2, BMP3, BMP4, BMP5, BMP6, BMP9, BMP10, BMP11, BMP12, BMP15, BMP16, DPP, Vgl, 60A protein, GDF-1, GDF3, GDF5, GDF6, GDF7, GDF8, GDF9, GDF10 and GDF11, capable of inducing repair of endochondral bone, or cartilage, chondral, or osteochondral defects;

a ~~non-synthetic, non-polymeric~~ matrix selected from the group consisting of collagen, apatites, hydroxyapatites, tricalcium phosphate, and admixtures thereof; and

a binding agent selected from the group consisting of cellulose and salts thereof;

wherein said binding agent has a degree of substitution of 0.65-0.90 and a viscosity of about 10-200 cP at a 4% (w/v) concentration of said binding agent.

Claim 2 (canceled).

Claim 3 (previously presented): The device of claim 1, wherein said bone morphogenetic protein is selected from the group consisting of OP1, OP2, BMP2, BMP4, BMP5, and BMP6.

Claim 4 (currently amended): A device for inducing local bone and cartilage formation comprising a bone morphogenetic protein comprising an amino acid sequence having at least 70% homology with the C-terminal 102-106 amino acids, including the conserved seven cysteine domain, of human OP1;

a ~~non-synthetic, non-polymeric~~ matrix selected from the group consisting of collagen, apatites, hydroxyapatites, tricalcium phosphate, and admixtures thereof; and

a binding agent selected from the group consisting of cellulose and salts thereof;

wherein said binding agent has a degree of substitution of 0.65-0.90 and a viscosity of about 10-200 cP at a 4% (w/v) concentration of said binding agent; and

wherein said bone morphogenetic protein is capable of inducing repair of endochondral bone when implanted together with a matrix in a mammal.

Claim ~~5~~ 3 (previously presented): The device of claim 1 wherein said bone morphogenetic protein is OP-1.

Claim ~~6~~ 4 (withdrawn): The device of claim 1 wherein said device comprises at least two different bone morphogenetic proteins.

Claim 7 (canceled).

Claim ~~8~~ 5 (original): The device of claim 1 wherein said matrix is collagen.

Claim ~~9~~ 6 (withdrawn): The device of claim 1 wherein said device comprises at least two different matrix materials.

Claim 10 (canceled).

Claim ~~11~~ 7 (currently amended): The device of claim 1 wherein said binding agent is ~~selected from the group consisting of alkylcelluloses~~ an alkylcellulose.

Claim ~~12~~ 8 (original): The device of claim 1 wherein said binding agent is selected from the group consisting of methylcellulose, methylhydroxyethylcellulose, hydroxyethylcellulose, hydroxypropylmethylcellulose, carboxymethylcellulose, sodium carboxymethylcellulose, hydroxyalkylcelluloses, and admixtures thereof.

Claim ~~13~~ 9 (currently amended): The device of claim 1 wherein said binding agent is carboxymethylcellulose or ~~the~~ a sodium salt thereof.

Claim ~~14~~ 10 (withdrawn): The device of claim 1 wherein said device comprises at least two different binding agents.

Claim ~~15~~ 11 (original): The device of claim 1 further comprising a wetting agent.

Claim 16 (original): The device of claim ~~15~~ 11 wherein said wetting agent is saline.

Claim ~~17~~ 21 (currently amended): A device for inducing local bone or cartilage formation, comprising at least approximately 1.25 mg of OP-1 and at least approximately 180 mg of carboxymethylcellulose per 1000 mg of collagen matrix, wherein said carboxymethylcellulose has a degree of substitution of 0.65-0.90 and a viscosity of about 10-200 cP at a 4% ~~(w/v~~ (w/v) concentration of said carboxymethylcellulose.

Claim ~~18~~ 22 (previously presented): The device of claim ~~17~~ 21 comprising at least approximately 2.5 mg of OP-1 per 1000 mg of collagen matrix.

Claim ~~19~~ 23 (previously presented): The device of claim ~~17~~ 21 or ~~18~~ 22 comprising at least approximately 200 mg of carboxymethylcellulose per 1000 mg of collagen matrix.

Claim 20 (previously presented): The device of claim 1 wherein the binding agent to matrix ratio is one part by weight binding agent to 1-10 parts by weight matrix.

Claim ~~21~~ 17 (previously presented): The device of claim ~~20~~ 12 wherein the binding agent to matrix ratio is one part by weight binding agent to 5 parts by weight matrix.

Claim ~~22~~ 18 (previously presented): The device of claim ~~20~~ 12 wherein the binding agent to matrix ratio is one part by weight binding agent to 1-5 parts by weight matrix.

Claim ~~23~~ 13 (previously presented): The device of claim 1 wherein the binding agent to matrix ratio is 1-10 parts by weight binding agent to 1 part by weight matrix.

Claim ~~24~~ 19 (previously presented): The device of claim ~~23~~ 13 wherein the binding agent to matrix ratio is fewer than 10 parts by weight binding agent to one part by weight matrix.

Claim ~~25~~ 24 (currently amended): The device of claim ~~17~~ 21 or ~~18 or 19~~ 22 further comprising saline.

Claims 26-30 (canceled).

Claim ~~31~~ 26 (previously presented): A device for inducing local bone or cartilage formation comprising:

OP-1;

collagen matrix; and

carboxymethylcellulose having a degree of substitution of 0.65-0.90 and a viscosity of about 10-200 cP at a 4% (w/v) concentration of said carboxymethylcellulose.

Claim ~~32~~ 27 (currently amended): A kit for inducing local bone or cartilage formation, the kit comprising:

(a) a first receptacle housing a bone morphogenetic protein selected from the group consisting of OP1, OP2, OP3, BMP2, BMP3, BMP4, BMP5, BMP6, BMP9, BMP10, BMP11, BMP12, BMP15, BMP16, DPP, Vgl, 60A protein, GDF-1, GDF3, GDF5, GDF6, GDF7, GDF8, GDF9, GDF10 and GDF11 and a ~~non-synthetic, non-polymeric~~ matrix selected from the group consisting of collagen, apatites, hydroxyapatites, tricalcium phosphates and admixtures thereof, and

(b) a second receptacle housing a binding agent selected from the group consisting of cellulose, and salts thereof,

wherein said binding agent has a degree of substitution of 0.65-0.90 and a viscosity of about 10-200 cP at a 4% (w/v) concentration of said binding agent.

Claim ~~33~~ 28 (previously presented): The kit of claim ~~32~~ 27 further comprising a receptacle adapted to house a wetting agent.

Claim 34 (canceled).

Claim ~~35~~ 29 (currently amended): A kit for inducing local bone or cartilage formation, the kit comprising:

a first receptacle housing a bone morphogenetic protein selected from the group consisting of OP1, OP2, OP3, BMP2, BMP3, BMP4, BMP5, BMP6, BMP9, BMP10, BMP11, BMP12, BMP15, BMP16, DPP, Vg1, 60A protein, GDF-1, GDF3, GDF5, GDF6, GDF7, GDF8, GDF9, GDF10 and GDF11, a ~~non-synthetic, non-polymeric~~ matrix selected from the group consisting of collagen, apatites, hydroxyapatites, tricalcium phosphates, and admixtures thereof, and a binding agent selected from the group consisting of cellulose, and salts thereof,

wherein said binding agent has a degree of substitution of 0.65-0.90 and a viscosity of about 10-200 cP at a 4% (w/v) concentration of said binding agent.

Claim ~~36~~ 30 (previously presented): The kit of claim ~~35~~ 29, further comprising a second receptacle adapted to house a wetting agent.

Claim ~~37~~ 14 (previously presented): The device of claim ~~5~~ 8, wherein the amount of the OP-1 ranges from approximately 0.125 mg to 10.0 mg.

Claim ~~38~~ 15 (previously presented): The device of claim ~~37~~ 14, wherein the amount of the OP-1 is approximately 3.5 mg.

Claim ~~39~~ 25 (new): The device of claim ~~19~~ 23 further comprising saline.